

WHAT IS CLAIMED IS:

1. An isolated DNA sequence coding for a purified polypeptide that binds to caspase-8, said polypeptide comprising:

(a) the amino acid sequence of SEQ ID NO:6 or the amino acid sequence of SEQ ID NO:7;

(b) the amino acid sequence of an analog of (a), having no more than ten changes in the amino acid sequence of (a), each said change being a substitution, deletion or insertion of an amino acid, which analog binds to caspase-8;

(c) the amino acid sequence of a polypeptide encoded by a DNA sequence capable of hybridizing with the DNA sequence of SEQ ID NO:5 or the portion of RPCI5-1057I20 which encodes SEQ ID NO:7, under moderately stringent conditions, which polypeptide binds to caspase-8.

2. An isolated DNA sequence in accordance with claim 1, wherein said polypeptide consists of the polypeptide of (a) or (b).

3. An isolated DNA sequence in accordance with claim 1, wherein said polypeptide consists of the polypeptide of (a).

4. An isolated DNA sequence in accordance with claim 1, wherein said polypeptide consists of the amino acid sequence of SEQ ID NO:6.

5. An isolated DNA sequence in accordance with claim 1, wherein said polypeptide consists of the amino acid sequence of SEQ ID NO:7.

6. An isolated DNA sequence in accordance with claim 1, wherein said sequence of (a) is SEQ ID NO:6.

7. An isolated DNA sequence in accordance with claim 1, wherein said sequence of (a) is SEQ ID NO:7.

8. An isolated DNA sequence coding for a purified polypeptide that binds to caspase-8, said polypeptide consisting of the amino acid sequence of a fragment of SEQ ID NO:6 or a fragment of SEQ ID NO:7, which fragment binds to caspase-8.

9. An isolated DNA sequence in accordance with claim 1, comprising the DNA sequence of SEQ ID NO:1.

10. An isolated DNA sequence in accordance with claim 1, comprising the DNA sequence of SEQ ID NO:3.

11. An isolated DNA sequence in accordance with claim 1, comprising the DNA sequence of SEQ ID NO:5.

12. A vector comprising a DNA sequence according to claim 1.

13. A vector comprising a DNA sequence according to claim 8.

14. A eukaryotic or prokaryotic host cell containing a vector according to claim 12.

15. A eukaryotic or prokaryotic host cell containing a vector according to claim 13.

16. A method for producing a polypeptide that binds to caspase-8, comprising growing a host cell in accordance with claim 14 under conditions that allow production of said polypeptide, and isolating said polypeptide.

17. A method for producing polypeptide that binds to caspase-8, comprising growing a host cell in accordance with claim 15 under conditions that allow production of said polypeptide, and isolating said polypeptide.

18. A purified polypeptide that binds to caspase-8, said polypeptide comprising:

(a) the amino acid sequence of SEQ ID NO:7;

(b) the amino acid sequence of an analog of (a), having no more than ten changes in the amino acid sequence of (a), each said change being a substitution, deletion or insertion of an amino acid, which analog binds to caspase-8;

(c) the amino acid sequence of a polypeptide encoded by a DNA sequence capable of hybridizing with the DNA sequence of the portion of RPCI5-1057I20 which encodes SEQ ID NO:7, under moderately stringent conditions, which polypeptide binds to caspase-8;

(d) the amino acid sequence of a fragment of (a), which fragment binds to caspase-8; or

(e) a derivative of (a), (b), (c), or (d) by modification of a side group of one or more amino acid residues thereof, which derivative binds to caspase-8.

19. The polypeptide in accordance with claim 18, wherein said polypeptide consists of the polypeptide of (a) or (b) or a derivative of (a) or (b) by modification of a side group of one or more amino acid residues thereof without changing one amino acid to another of the twenty commonly occurring natural amino acids, which derivative binds to caspase-8.

20. The polypeptide in accordance with claim 18, wherein said polypeptide comprises the polypeptide of (a) or a derivative of (a) by modification of a side group of one or more amino acid residues thereof, which derivative binds to caspase-8.

21. A polypeptide in accordance with claim 18, which consists of the amino acid sequence of SEQ ID NO:7.

22. A purified polypeptide that binds to caspase-8, said polypeptide consisting of the amino acid sequence of a fragment of SEQ ID NO:7, which fragment binds to caspase-8, or a derivative thereof by modification of a side group of one or more amino acid residues thereof, which derivative binds to caspase-8.

23. A caspase-8 interacting peptide in accordance with claim 22, consisting of a derivative of said fragment by modification of a side group of one or more amino acid residues thereof, which derivative binds to caspase-8.

24. A composition comprising a polypeptide according to claim 18, and a pharmaceutically acceptable excipient.

25. A composition comprising a polypeptide according to claim 22, and a pharmaceutically acceptable excipient.

26. A ribozyme specific for a nucleotide sequence corresponding to a DNA sequence according to claim 1.

27. An antisense oligonucleotide comprising at least 9 nucleotides of a sequence complementary to a DNA sequence according to claim 1.

28. An antibody directed at an epitope of a polypeptide encoded by the DNA of claim 1.

29. An immunoassay for the detection of a caspase-8 interacting protein, comprising the antibody according to claim 28 as a reagent.

30. A method of identifying caspase-8 interacting proteins, comprising the steps of

a) providing a yeast cell having a reporter gene linked to a promoter comprising a DNA sequence motif;

b) expressing in said yeast cell a p20 subunit of said caspase-8;

c) expressing in said yeast cell a fusion protein of a DNA binding domain and the p10 and/or p20 subunit of said caspase-8, wherein said DNA binding domain is capable of binding to said DNA sequence motif;

d) optionally, expressing in said yeast cell an unfused p10 or p20 subunit of said caspase-8;

e) transforming a culture of said yeast cell with a library consisting of an expression vector driving expression of a fusion protein consisting of a cDNA library and a transcriptional activator;

f) screening the culture of transformed yeast cells for yeast cells wherein the reporter gene is activated, and

g) isolating a yeast cell from step f) and further isolating the caspase-8 interacting protein, which is expressed in its prey vector.

31. A method of modulating caspase-8 activity comprising bringing a polypeptide capable of binding to caspase-8, said polypeptide being encoded by a DNA sequence of claim 1, into contact with caspase-8.

32. A method of modulating TNF-receptor or Fas mediated effects in a cell, comprising bringing said cell into

contact with a caspase-8 binding polypeptide encoded by a DNA sequence of claim 1.

33. A method for modulating apoptosis of a cell, comprising bringing a caspase-8 binding polypeptide encoded by the DNA of claim 1 into contact with said cell.